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Appl. No.: 10/809,981  
Atty Dkt. No.: 10030938-1

### AMENDMENTS

#### In the Claims:

1. (Currently Amended) A method for preparing a biopolymer array production system for operation, the method comprising:
  - selecting at least one printhead assembly comprising a printhead;
  - entering, by an operator or electronically reading, printhead-related data including criteria selected from one or more of: the type of said printhead, number of ~~such~~ printheads of said printhead assembly, type of nozzle plate on said printhead, alignment method of said nozzle plate alignment method, number of wells per said printhead, number of orifices per said well, number of nozzle rows per said printhead, spacing between said printhead orifices, and spacing between said nozzle rows; and
  - configuring, with a computer processor, a printhead control routine based on said entered data, in order to control printhead function.
2. (Original) The method of claim 1, wherein a user interface prompts user entry of at least one of said criteria.
3. (Original) The method of claim 2, wherein a user enters at least one of said criteria.
4. (Currently Amended) The method of claim 1 wherein said type of printhead, number of such printheads, type of nozzle plate and alignment method are Printhead Assembly Objects, and said number of wells per printhead, number of orifices per well, number of nozzle rows per printhead, spacing between printhead orifices and spacing between nozzle rows are Printhead Group Objects, as treated by said processor.

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5. (Currently Amended) The method of claim 4, wherein, when one or more data selected from Printhead Assembly Objects is entered and one or more data selected from Printhead Group Objects is entered, said processor first configures a portion of said control routine based on said entered data from Printhead Assembly Objects, then configures another portion of said control routine based on said entered data from Printhead Group Objects in relation to said entered data from Printhead Assembly Objects.

6. (Currently Amended) A method for preparing a biopolymer array production system for operation, the method comprising:

selecting at least one printhead assembly comprising a printhead;

providing printhead-related data including Printhead Assembly Object criteria and Printhead Group Object criteria, said Printhead Assembly Object criteria selected from the type of said printhead, number of such printheads of said printhead assembly, type of nozzle plate on said printhead and alignment method of said nozzle plate, said Printhead Group Object criteria selected from a number of wells per said printhead, number of orifices per said well, number of nozzle rows per said printhead, spacing between said printhead orifices and spacing between said nozzle rows; and

providing printhead-related data including Printhead Assembly Object criteria and Printhead Group Object criteria, said Printhead Assembly Object criteria selected from the type of said printhead, number of such printheads of said printhead assembly, type of nozzle plate on said printhead and alignment method of said nozzle plate, said Printhead Group Object criteria selected from a number of wells per said printhead, number of orifices per said well, number of nozzle rows per said printhead, spacing between said printhead orifices and spacing between said nozzle rows; and

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configuring, with a computer processor, a printhead control routine based on said ~~criteria data~~ by first producing a portion of said control routine based on said Printhead Assembly Objects, then producing another portion of said routine based on said Printhead Group Objects in relation to said Printhead Assembly Objects.

7. (Original) The method of claim 6, wherein an operator enters information corresponding to at least a portion of said printhead-related data.

8. (Currently Amended) The method of claim 6, wherein said printhead-related data is read from electronic media associated with a said printhead assembly when said assembly is plugged into said system.

9. (Currently Amended) A method of producing a biopolymer array, the method comprising:

providing a production system prepared according to the method of any of claims 1 through 7, and

controlling said system by said control routine to print a biopolymer array by ejecting reagent drops from any of said printheads spaced from ~~said a~~ substrate surface during movement, ~~said an~~ ejection head and said surface relative to each other,

wherein said reagent drops are ejected according to a predetermined pattern onto said surface to produce said array.

10. (Previously Presented) The method of claim 9, wherein said biopolymers are polynucleotides or polypeptides.

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11. (Original) A biopolymer array produced according to the method of claim 10.
12. (Previously Presented) A method of detecting the presence of an analyte in a sample, said method comprising:
  - contacting a sample suspected of comprising said analyte with a biopolymer array according to claim 11; and
  - detecting any binding complexes on the surface of the said array to obtain binding complex data.
13. (Original) The method of claim 12, wherein said analyte is a nucleic acid.
14. (Previously Presented) A method comprising transmitting data resulting from a detecting according to claim 12, from a first location to a remote location.
15. (Currently Amended) A method comprising receiving data representing a result of a reading obtained by the method of claim 12.
16. (Original) A method comprising forwarding data representing a result of a reading an array fabricated by the method of claim 12.
17. (Currently Amended) A computer-readable medium comprising ~~at least a portion of~~ a program as configured by the method of claim 1 to direct an array fabrication apparatus.
18. (Canceled)

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19. (Currently Amended) A computer-readable medium comprising ~~at least a portion of a~~  
program for controlling the processor acts according to the method of claim 1.

20. (Canceled)

21. (Original) A kit comprising the computer readable medium of claim 19, in packaged  
combination with instructions for use with the same.